

THE INVENTION CLAIMED IS

1. A metal piece, having first side and a second side, produced by the method of:

operatively connecting an acoustic coupling material to said second side of said metal piece, and

laser peening all or a portion of said metal piece from said first side.

2. The metal piece produced by the method of claim 19, wherein said laser peening said metal piece from said first side creates a shock wave in said metal piece and wherein said acoustic coupling material couples a portion or all of the shock wave out of said metal piece from said second side.

3. The metal piece produced by the method of claim 19, wherein said laser peening said metal piece from said first side processes rectangular spots on said first side.

4. The metal piece produced by the method of claim 19, wherein said laser peening said piece from said first side utilizes a laser that provides a substantially rectangular spot.

5. The metal piece produced by the method of claim 19, including operatively connecting an acoustic coupling material to said first side of said metal piece and laser peening all or a portion of said metal piece from said second side.

6. The metal piece produced by the method of claim 19, wherein said laser peening said metal piece from said second side creates a shock wave in said metal piece and wherein said acoustic coupling material couples a portion or all of the shock wave out of said metal piece from said first side.

7. The metal piece produced by the method of claim 24, wherein said laser peening said metal piece from said second side processes rectangular spots on said second side.

8. The metal piece produced by the method of claim 24, wherein said laser peening said piece from said second side utilizes a laser that provides a substantially rectangular spot.

9. The metal piece produced by the method of claim 19, wherein said acoustic coupling material is a freon compound or water.

10. The metal piece produced by the method of claim 19, wherein said acoustic coupling material is a freon compound.

11. The metal piece produced by the method of claim 19, wherein said acoustic coupling material is water.

12. The metal piece produced by the method of claim 19, wherein said acoustic coupling material is fluorinet.

13. The metal piece produced by the method of claim 19, wherein said laser peening all or a portion of said metal piece from said first side includes operatively

connecting an ablation layer of material to said first side of said metal piece and transmitting laser light into said ablation layer of material.

14. The metal piece produced by the method of claim 31, wherein said laser light is transmitted into but not out of said ablation layer of material.

15. The metal piece produced by the method of claim 32, including operatively connecting a tamping layer to said ablation layer of material.

16. The metal piece of claim 19, produced by the method including the additional steps of operatively connecting an acoustic coupling material to said first side of said metal piece and laser peening said metal piece from said second side, wherein said laser peening is produced by laser pulses alternately directed onto said first side and said second side, wherein sequential laser pulses are stepped over said first side and over said second side while alternating between said first side and said second side.

17. The metal piece of claim 34, wherein said sequential laser pulses are stepped over said first side and over said second side while alternating between said first side and said second side on equivalent spots on said first side and said second side.

18. The metal piece of claim 35, wherein said equivalent spots on said first side and said second side are adjacent to each other.